

**Abstract of the Disclosure**

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An assay is performed such that a compendium of raw assay data is developed and is then positionally corrected. The assay comprises a plurality of longitudinally oriented plates  $p$ , each having a wells organized into rows  $i$  and columns  $j$ . Each well  $(i, j, p)$  has a raw value  $x_{ijp}$  associated therewith that is

10 deconstructed into: a plate effect value representing extraneous effects attributable to the plate  $p$  of the well  $(i, j, p)$ ; a row effect value representing extraneous effects attributable to the row  $i$  on the plate  $p$  of the well  $(i, j, p)$ ; a column effect value representing extraneous effects attributable to the column  $j$  on the plate  $p$  of the well  $(i, j, p)$ ; a non-additive, interaction effect representing

15 extraneous positional effects attributable to consistent positional effects beyond the plate, row, and column effects previously determined for the  $(i, j, p)$  well on plate  $p$ ; and a residual data value that is left over once all the above extraneous effects are taken into account. Thereafter, the residual data value associated with each well  $(i, j, p)$  is employed to represent the well  $(i, j, p)$  as compared with all

20 other wells  $(i, j, p)$  on the plate  $p$ .